



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,414	12/04/2003	Philip J. Ellerbrock	038190/270524	7718

826 7590 11/09/2005

ALSTON & BIRD LLP
BANK OF AMERICA PLAZA
101 SOUTH TRYON STREET, SUITE 4000
CHARLOTTE, NC 28280-4000

EXAMINER

DANG, KHANH

ART UNIT PAPER NUMBER

2111

DATE MAILED: 11/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Interview Summary	Application No.	Applicant(s)	
	10/727,414	ELLERBROCK ET AL.	
	Examiner	Art Unit	
	Khanh Dang	2111	

All participants (applicant, applicant's representative, PTO personnel):

- (1) Khanh Dang. (3) ____.
- (2) Mr. Ransom (Atty of Record). (4) ____.

Date of Interview: 03 November 2005.

Type: a) ☒ Telephonic b) ☐ Video Conference
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☐ No.
If Yes, brief description: ____.

Claim(s) discussed: 1.

Identification of prior art discussed: Karolys and Hanna.

Agreement with respect to the claims f) ☐ was reached. g) ☐ was not reached. h) ☒ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Khanh Dang

Khanh Dang
Primary Examiner

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: In reference to the 112 Rejection, Mr. Ransom agrees with the Examiner to amend claim 1 to clearly define that the network device interface does not include a processor. In reference to the art rejections, Mr. Ransom also agrees with the Examiner that in line 14 (claim 1), after the word "interfaces," the phrase -- are connected to the common digital bus in parallel to --. The Examiner agrees with Mr. Ransom that the proposed amendments to claim 1 and the Examiner's suggested amendment should place claim 1 in condition for allowance.

Mr. Ransom will file an RCE so that the proposed amendments can be entered.

On a side note, the Examiner would like to thank Mr. Ransom for his effort and cooperation to advance prosecution of this application by discussing in length, on behalf of the Applicants, the issues related to the rejections with the Examiner during the 11/03/05 Interview, and proposing amendments to the claim.

Applicant Initiated Interview Request Form

In re: Ellerbrock et al
Appl. Nos.: 10/727,414, 10/729,560, 10/728,349 Group Art Unit: 3654
Filed: December 4, 2003 Examiner: K. Dang
For: NETWORK DEVICE INTERFACE FOR DIGITALLYINTERFACING
DATA CHANNELS TO A CONTROLLER VIA A NETWORK

Status of Application: Final Rejection

Tentative Participants:

(1) Examiner Dang (2) Kevin Ransom

Proposed Date and Time of Interview: November 3, 2005; 2:00 pm

Type of Interview Requested:

(1) ☒ Telephonic (2) ☐ Personal (3) ☐ Video Conference

Exhibit To Be Shown or Demonstrated: ☐ YES ☒ NO

If yes, provide brief description:

Issues To Be Discussed

Rejections of application nos. 10/727,414, 10/729,560, 10/728,349

Brief Description of Arguments to be Presented:

Please see attached documents

An interview was conducted on the above-identified application on _____.

NOTE:

This form should be completed by applicant and submitted to the examiner in advance of the interview (see MPEP § 713.01).

This application will not be delayed from issue because of applicant's failure to submit a written record of this interview. Therefore, applicant is advised to file a statement of the substance of this interview (37 CFR1.133(b)) as soon as possible.

(Applicant's Representative Signature)

CLT01/4762177v1

(Examiner/SPE Signature)

Appl. No.: 10/727,414 Confirmation No.: 7718
Applicant(s): Ellerbrock et al.
Filed: December 4, 2003
Art Unit: 2111
Examiner: K. Dang
Title: NETWORK DEVICE INTERFACE FOR DIGITALLY INTERFACING
DATA CHANNELS TO A CONTROLLER VIA A NETWORK
Docket No.: 038190/270524

Proposed Amendment:

1. (proposed amended) A serial, multiplexed communications system comprising:

a bus controller comprising a processor for issuing a plurality of commands,
wherein said commands are issued in a serial manner;

a plurality of data channels for performing predefined functions in response to the commands;

a common digital bus interconnecting said bus controller and said plurality of data channels for supporting serial communication therebetween; and

a plurality of network device interfaces, one of which is associated with each data channel for interconnecting said respective data channel with said common digital bus and communicating information from said bus controller to said data channel, wherein at least one of said network device interfaces comprises a state machine such that said network device interface communicates with said bus controller independent of use of a processor, and wherein said network device interfaces perform predefined functions in parallel to thereby support high speed communication over said common digital bus.

Remarks:

Applicant first disagrees that the '108 Karolys discloses that the TBIM is a state machine. This is never positively stated in the reference. There is also nothing in the reference to suggest to one skilled in the art that the TBIM is a state machine. In fact, there is disclosure in the reference that may suggest otherwise. The '108 Karolys patent describes a miniature "smart sensor" and elaborates on the features and functions of a

TBIM that describe similar features to our NDI. However, nowhere in the specification does it identify what the “bi-directional digital interface” in the TBIM is.

Further, from what is taught in the ‘108 Karolys patent, someone skilled in the art would not deduce the need for parallel processing because the ‘108 Karolys does not identify the issues that a parallel state machine address such as very fast bus rate capabilities and multiple addressing capabilities (such as for multiple sample rates) for a sensor and actuator bus. The ‘108 Karolys patent identifies a bit rate of 115 Kbps. At this bit rate, a state machine is likely not needed. This disclosed bit rates indicates that the inventor was not concerned with efficiencies that would be required for higher bit rates. The efficiencies of a state machine, which would be capable of greater bus speeds, would likely not be realized for the low bit rate disclosed in the ‘108 Karolys patent. The present systems can operate in excess of 40 Mbps and perform all the features identified above which is impossible without a state machine.

CLT01/4762162v1